

### **REMARKS**

This is a full and timely response to the outstanding final Office Action mailed January 16, 2004. Upon entry of the amendments in this response, claims 1 – 40 remain pending. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. Claims 1 – 40 are Patentable Over the Cited Art

The Office Action rejects claims 1 - 30 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,289,462 to McNabb *et al.* (“the ‘462 patent”) in view of U.S. Patent No. 5,784,463 to Chen *et al.* (“the ‘463 patent”). The Office Action rejects claims 31-40 under 35 U.S.C. §103(a) as being unpatentable over the ‘462 patent and the ‘463 patent and further in view of U.S. Patent No. 5,560,008 to Johnson *et al.* (“the ‘008 patent”).

Applicants respectfully submit that the rejection of claims 1 – 40 under §103 should be withdrawn for any of the following reasons, each of which are separately discussed below:

- (1) the ‘463 patent cannot be used as a basis for this rejection because it is improper nonanalogous prior art that cannot legally be relied on for a rejection under 35 U.S.C. §103;
- (2) the Office Action fails to establish a prima facie case of obviousness because, even assuming for the sake of argument that the ‘463 patent can be relied on as a basis for a rejection under §103, the Examiner has not established the proper suggestion or motivation to combine the ‘462 patent and the ‘463 patent in the manner suggested; and
- (3) the Office Action fails to establish a prima facie case of obviousness because, even assuming for the sake of

argument that the '463 patent is proper analogous art AND a proper suggestion or motivation to combine has been established, the combined teachings of the '462 patent and the '463 patent do not teach all of the claim limitations.

A. The Rejection of Claims 1 – 40 is Legally Deficient Because the '463 Patent Cannot Be Used as a Basis for a Rejection Under 35 U.S.C. §103 Because the References is Nonanalogous Prior Art

Applicants respectfully submit that the rejection of claims 1 – 40 is improper, and therefore should be withdrawn and the claims be allowed, because the '463 patent is improper “nonanalogous art” that may not legally be relied upon to support a prima facie case of obviousness. In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must be analogous art. In other words, the reference must be either in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. MPEP §2141.01(a); *See, In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992); *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

The '462 patent relates to a trusted compartmentalized computer operating system (O/S) on a web server for controlling access to the execution of the software processes. The trusted O/S provides an added layer of security in two ways: by attaching additional security attributes to each of the O/S components (*e.g.*, files, processes, data packets); and by extending the security checks to use the new attributes. Col. 9, ll. 5 – 10. When a process makes a request to “call” or “execute” a program stored in a file, the O/S compares the attributes of the process to the attributes of the file where the program is stored, in order to

see if the process will be allowed to run the program. The additional security attributes (*e.g.*, “sensitivity label”) are used by the O/S to allow greater control over which programs are available. For example, the trusted O/S includes an “authorization database” that is used to see if the user running the process can access or execute the requested program. Col. 9, ll. 40 – 50. Therefore, the ‘462 patent is mainly related to the field of O/S functionality and the problems associated with securely controlling access to software processes to be executed via the O/S.

Unlike the ‘462 patent, the ‘463 patent is completely unrelated to the field of O/S functionality. Rather, the ‘463 patent relates to a process for authenticating users (*e.g.*, clients 10) that attempt to gain access to an application server 25 over a communications network 5. The authentication process of the ‘463 patent involves a very specific implementation of a public/private key cryptosystem. Col. 2, ll. 52 – 56. The authentication process of the ‘463 patent involves an authentication server 20 which is assigned a private key and a corresponding public key by a token issuer or by a certification authority/key management agency 35. Col. 4, ll. 32 – 34. “Tokens” are distributed to users (*i.e.*, clients 10) during a registration process. Each token has embedded therein a public key of the token issuer or certification authority. Without going into unnecessary detail, Applicants note that much of the disclosure of the ‘463 patent involves a detailed description of the verification/authentication schemes (illustrated in Figs. 3 & 4) between clients 10 and authentication server 25 using the tokens and the cryptography associated with the public/private keying.

Therefore, it is clear that the ‘463 patent is totally unrelated to O/S functionality for controlling access to the execution of software processes via an O/S. Furthermore, one of ordinary skill in the art of operating systems would not look for functional enhancements in the field of cryptography. In fact, Applicants respectfully submit that such solutions are not

disclosed at all in the '463 patent. Therefore, Applicants respectfully assert that the '463 patent is improper "nonanalogous art" that may not be relied upon to support a rejection under §103. Accordingly, Applicants respectfully request that the rejection be withdrawn and claims 1 – 40 be allowed.

B. Prima Facie Case of Obviousness Not Established: No Suggestion or Motivation to Combine References as Suggested

The rejection of claims 1 - 40 under 35 U.S.C. §103(a) should be withdrawn because the Examiner has failed to establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness by combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill, to modify the primary reference (the '462 patent) in the manner allegedly taught by the secondary reference (the '463 patent). *See e.g.*, MPEP §§2142, 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Even though Applicants believe the §103 rejection is improper because the '463 patent is unavailable "nonanalogous art," Applicants further submit that the Office Action fails to establish a proper motivation or suggestion to modify the alleged teaching of the '462 patent with the alleged teaching of the '463 patent such as to render obvious claims 1 - 40.

The Office Action rejects independent claims 1, 11, and 21, as well as many other dependent claims, based on the same argument. Nonetheless, Applicants respectfully submit that the scope of these claims are not co-extensive. In the interests of brevity, however, Applicants address the similar rejection of all of the independent claims by pointing out the Examiner's failure to establish the proper suggestion or motivation to combine the operating

system of the '462 patent with the dynamic client configuration functionality of the '463 patent.

Specifically, the Office Action argues that the '462 patent discloses all of the elements of independent claims 1, 11, and 21 except for a system call trap that modifies the plurality of attributes for the software process based on an executable environment attribute stored in association with the executable file. The Office Action alleges that the '463 patent teaches “the modifying of attributes associated with a process (dynamic configuration of the client, p6 10 – 24) based on an executable environment attribute stored in association with the executable file (service entitlement from an access control database, Id.).” The Office Action further argues that it would have been obvious to combine the teachings of the '463 patent with the '462 patent because “the ‘reconfiguration’ of client attributes while maintaining the security would enable access to various protected applications through ‘different or changing user entitlements’ (Chen Abstract) at the same time as reducing user authentication-overhead while increasing flexibility for the user.”

It is well-established law that, in order to properly combine select elements from differing prior art sources, there must be some teaching or suggestion *within the prior art* to make the combination specifically claimed by the Appellant’s invention. *W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc.*, 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

“The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ...” ***Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure...*** In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of

technological literature, including that which might lead away from the claimed invention."

(Emphasis added) *In re Dow Chemical Company*, 837 F.2d 469, 473 (Fed. Cir. 1988).

It has often been noted that, "[h]umans must work with old elements, most if not all of which will normally be found somewhere in an examination of the prior art." *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549, 220 U.S.P.Q. 193 (Fed. Cir. 1983). Furthermore, that features, even distinguishing features, are "disclosed" in the prior art is alone insufficient. As above indicated, it is common to find elements or features somewhere in the prior art. Moreover, most if not all elements perform their ordained and expected function. The test is whether the claimed invention as a whole, in light of all the teachings of the references in their entireties, would have been obvious to one of ordinary skill in the art at the time the invention was made. *Id.*

In this regard, Applicant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest **both** the combination of elements **and** the structure resulting from the combination. *Stiftung v. Renishaw PLC*, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements.

Applicants respectfully submit that the purported motivation or suggestion provided by the Office Action is a classic example of impermissible hindsight reasoning based solely on Applicants' disclosure. In this regard, Applicants note that the purported motivation cited in the Office Action ("reducing user authentication-overhead while increasing flexibility for the user") is NOT in the '463 patent. The Office Action alleges that the suggestion or

motivation to combine the references is in the Abstract of the '463 patent. Specifically, the Office Action points to the Abstract and the recitation of the language "reconfiguration" and "different user entitlements" for the purported motivation. Applicants note that this cited language is the ONLY language actually contained in the Abstract which is used to support the allegation of the motivation or suggestion to combine the references.

Applicants respectfully assert that this cited language is legally insufficient to meet the Examiner's prima facie burden of establishing a proper motivation or suggestion to combine the references. In this regard, Applicants respectfully assert that the cited language -- "reconfiguration" and "different or changing user entitlements" -- does not suggest the desirability of combining the trusted operating system of the '462 patent with the user authentication process of the '463 patent. The objective of the '462 patent is to create a trusted computer server that controls access to the execution of software processes called via the operating system. The '463 patent has nothing to do with operating system functionality. Rather, the objective of the '463 patent is to provide a method for authenticating a user (*i.e.*, client computer) attempting to gain access to an application server 25 via a communications network 5. As mentioned above, the '463 patent merely suggests a user authentication scheme which employs public/private key cryptography for accessing the application servers. The '463 patent suggests nothing about operating system functionality. At best, the '463 patent merely suggests the desirability of controlling user access to the application server via user entitlement database 30.

Applicants note that the '463 patent does not say anything about a system call trap associated with an operating system kernel, which is configured to modify the attributes of the software process. Rather, the language "different or changing user entitlements" in the Abstract of the '463 patent merely refers to the functionality of reconfiguring the client token, after the client computer 10 has registered, with different user entitlements for different

software applications, different system, and/or different locations Col. 6 ll. 1 – 20. In other words, the user entitlements may be reconfigured without the client computer 10 having to re-register. Thus, Applicants respectfully submit that this portion of the ‘463 patent cited by the Examiner does not suggest the desirability of modifying the trusted operating system of the ‘462 patent with the client reconfiguration functionality of the ‘463 patent. Accordingly, Applicants respectfully assert that the Office Action fails to establish a proper suggestion or motivation to combine the ‘462 patent and the ‘463 patent in the manner suggested. Applicants note that the improper combination of the ‘462 patent and the ‘463 patent is the basis for the rejection of all claims 1 – 40. Accordingly, Applicants respectfully submit that the rejection of claims 1 – 40 is improper and, therefore, request that the rejection be withdrawn and the claims be allowed.

C. Prima Facie Case of Obviousness Not Established: Combination Fails to Teach All Elements

Even assuming for the sake of argument that there is some proper suggestion or motivation to modify or combine the ‘462 patent and the ‘463 patent as the Examiner suggests, the combination of these references fails to disclose, teach, or suggest each and every element of independent claims 1, 11, and 21. For this additional reason, Applicants respectfully submit that the rejection of claims 1 – 40 is improper. MPEP §2143.03.

Independent claims 1, 11, and 21 include the feature/element of “modifying the plurality of attributes for the software process based on an executable environment attribute stored in association with the executable file.” Independent claim 1 is directed to a system for establishing a secure execution environment for a software process executed by a program operating on a computer. Independent claim 1 recites “a system call trap associated with said



operating system kernel . . . configured to modify the plurality of attributes for the software process based on an executable environment attribute stored in association with said executable.” Independent claim 11 is directed to a method for establishing a secure execution environment for a software process executed by a program operating on a computer. Independent claim 11 recites “modifying the plurality of attributes for the software process based on an executable environment attribute stored in association with the executable file.” Independent claim 21 is directed to a computer-readable medium having a program for establishing a secure execution environment for a software process executed by a program operating on a computer. Independent claim 21 recites “logic for modifying the plurality of attributes for the software process based on an executable environment attribute stored in association with the executable file.”

The Office Action admits that the ‘462 patent does not disclose this feature. Furthermore, contrary to the assertion in the Office Action, Applicants respectfully submit that this feature is NOT disclosed, taught, or suggested by the ‘463 patent. As mentioned above, the ‘463 patent relates to a process for authenticating users (*e.g.*, clients 10) that attempt to gain access to an application server 25 over a communications network 5. The ‘463 patent suggests nothing about a system call trap associated with an operating system functionality. Moreover, the ‘463 patent suggests nothing about modifying the attributes for a software process to be executed based on an executable environment attribute stored in association with an executable file to be accessed by the software process. The Office Action alleges that this feature is taught in the Abstract of the ‘463 patent by the following description: “to provide for dynamic configuration of the client system to provide for different or changing user entitlements.” Applicants respectfully submit that, at best, this description merely suggests the feature of changing the entitlements for a given user. In other words, the user entitlement database may suggest multiple levels of entitlements based on different

systems, different locations, and/or different software applications to be accessed via applications server 25. Col. 6, ll. 1 – 20. The ‘463 patent, however, clearly does not suggest modifying the attributes for the software process to be executed based on an executable environment attribute stored in association with an executable file to be accessed by the software process.

Accordingly, and for at least this additional reason, Applicants respectfully submit that independent claims 1, 11, and 21 are patentable over the ‘462 patent and the ‘463 patent and, therefore, should be allowed. Dependent claims 2 – 10 and 31 - 33 (which depend from independent claim 1), dependent claims 12 – 20 and 34 - 37 (which depend from independent claim 11), and dependent claims 22 – 30 and 38 – 40 (which depend from independent claim 21), are allowable as a matter of law for at least the reason that they contain all features and elements of the corresponding independent claim. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Applicants respectfully assert that a prima facie case of obviousness has not been established and request that the rejection of claims 1 – 40 be withdrawn and the claims be allowed.

**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims 1 – 40 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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